DOCUMENT RESUME

ED 319 825 UD 027 412

AUTHOR	Schofield, Janet Ward
TITLE	Review of Research on School Desegregation's Impact on Elementary and Secondary School Students.
SPONS AGENCY	Connecticut State Dept. of Education, Hartford.
PUB DATE	89
NOTE	54p.
PUB TYPE	Information Analyses (070)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	*Blacks; Court Litigation; *Desegregation Effects; Elementary Secondary Education; Federal Courts; Literature Reviews; *Outcomes of Education; Racial Attitudes; Racial Integration; *Racial Relations; Research Needs; *School Desegregation; Urban Schools
IDENTIFIERS	*Brown v Board of Education; *Research Suggestions

ABSTRACT

The 1954 "Brown v. Board of Education" decision laid the basis for dismantling "de jure" racial segregation of schools. "Brown" represented a significant shift in the national attitude toward blacks and was an important advance in intergroup relations. However, in the last decade the proportion of black students enrolled in many large educationally deficient urban schools has been rising, resulting in racial isolation and "de facto" segregation. Desegregation appears to have resulted in a small improvement in black students' reading skills but no significant change in their mathematics skills. Some evidence has begun to accumulate indicating that desegregation may break a generational cycle of segregation and racial isolation by influencing such important adult outcomes as college graduation, income, and employment patterns but the measured effects are weak and appear to be dependent upon sex and geographic region. Studies of the effect of desegregation on intergroup attitudes are generally inconclusive and inconsistent, and no studies have focused on changes in intergroup behavior, despite indications that desegregated schooling can provide students with valuable behavioral experience that prepares them to function in a pluralistic society. School desegregation policies and practices can also have marked and predictable effects on intergroup relations. A list of 197 references is appended. (FMW)

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Review of Research on School Desegregation's Impact on Elementary and Secondary School Students

1989

Janet Ward Schofield
University of Pittsburgh

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A Brief Historical Overview

The history of black-white contact in the United States is long and complex. However the last thirty years have seen changes in relations between blacks and whites of a magnitude virtually unparalleled in that long history, except for the period after the Civil War which saw the end of slavery as a legal institution. One of the most controversial of these changes was the decision handed down in the Brown v Board of Education case in 1954. In that decision, the United States Supreme Court overturned the earlier doctrine, propounded in Plessy v Ferguson in 1896, that "separate but equal" public facilities for blacks and whites could be mandated by state law. Instead, it argued that such separation in the schools "generates a feeling of inferiority (in black children) that may affect their hearts and minds in a way unlikely ever to be undone" (347 U.S. at 494). Thus, enforced segregation of the schools by race was held to violate the equal protection clause of the United States Constitution (Read, 1975; Wisdom, 1975) and to provide an inherently unequal education for black and white children.

The original Brown decision concerned dual school systems set up for black and white children. However, the Supreme Court's 1973 Keyes decision extended the Brown decision to cover Mexican-Americans. The position of the courts with regard to whether other Hispanic groups, such as Puerto Ricans or Cubans, should be thought of as minority group members whose history requires the remedy of school desegregation is unclear (Orfield, 1978). However, from an economic, social, and educational standpoint, the isolation of any minority group seems likely to have numerous important negative repercussions in our increasingly heterogeneous society (Pettigrew, 1969a). No matter what the official legal status of Hispanics in various desegregation plans, their presence is being increasingly felt nationally (Aspira, 1979; Jaeger, 1987), as it is in the state of Connecticut. If current trends continue, Hispanics will become the largest minority group in the U.S. Since many Hispanics are concentrated in areas which also have large numbers of blacks, their presence effects desegregation plans in important ways. For example, for many Hispanics concern over bilingual-bicultural education far outweighs concern about desegregation (Orfield, 1978). Historically, the impetus for desegregation has usually come from minority parents concerned about their children's education. Thus, the presence of a large Hispanic population which may fear that dispersion of Hispanic students throughout the school system could weaken special language programs can create competing interests between these major minority groups.

The Brown decision and later attempts to implement it raised a storm of controversy (Edelman, 1973). Change of any real magnitude was delayed for over ten years until after the passage of the Civil Rights Act of 1964 and the Elementary and Secondary Education Act of 1965. Most of this change

occurred from 1965 to 1972 in the South, the region of the country characterized by state supported dual systems of the kind specifically dealt with in the Brown decision. In sharp contrast, little change occurred in those years in the North. For example, the proportion of black students in predominately white schools in the North and West shifted almost imperceptibly (from 28% to 29%) between 1968 and 1972 (Feagin, 1980).

Desegregation has continued in the southern and border states in the years since 1972, although the rate of change has slowed dramatically. In the North and West, racial isolation has tended to increase somewhat. This increase in isolation has been especially marked for Hispanic students (Jaeger, 1987) but it has occurred for blacks as well. In fact, over 80% of all black students in these regions now attend majority black schools (Rist, 1980). A variety of factors including differential birth and immigration rates, differential usage of private schools, and the differential flow of white and minority families to the suburbs has led to increasing racial isolation in the schools. A number of Connecticut's major cities exemplify this trend toward increasing minority group isolation. For example, between 1971 and 1986 Hartford's minority student enrollment rose from 69% to 90%. Bridgeport's enrollment shifted from 53% to 83% minority in that same time period (The Committee on Racial Equality, 1988).

The Goals of This Review

The Brown v. Board of Education decision was based on the constitutional principal of equal protection (Read, 1975; Wisdom, 1975). Yet for most majority and minority group members alike, the most immediate and pressing concern has been how, precisely, desegregation is likely to affect children -- especially their own children. This widespread concern about the impact of desegregation and the controversy over what its effects might be have led to a very substantial amount of research. There is some research on desegregation's impact on a wide array of social outcomes such as residential integration, community protest movements, and employment patterns for teachers and administrators from various ethnic groups. However, there is much more research on the impact of desegregation on students themselves -- most notably on their academic achievement and on relations between students from different ethnic and racial groups. It is this kind of work which is the focus of this review. Where existing research makes it possible, I will also touch on policies and practices which seem to maximize positive outcomes and minimize negative ones.

Before turning to a discussion of the conclusions which have emerged from research on the social and academic outcomes of desegregation, I will deal with another very important issue -- the

methodological and other problems which typify this work in this area. Some readers may find the six pages devoted to this topic excessive. Indeed, it is possible to skip these pages and proceed directly to the research summary. However, my concern with methodology and related issues is much more than pedantic nitpicking since poor methodology can either mask real effects or suggest false ones.

Problems in Assessing the Effects of School Desegregation

Deciding on the Relevant Studies

An attempt to assess definitively the impact of school desegregation on students is limited by several factors. First, as indicated previously, most of the actual implementation of school desegregation plans occurred in the late 1960's and early 1970's. Thus any review which limited itself to examining the impact of such court-ordered plans would of necessity depend heavily on data which are almost two decades old. Although this task might be of interest from a historical standpoint, its implications for the present and the future would be far from clear. The economic and social position of blacks in American society has changed substantially in this time period. So have the attitudes and behavior of at least a significant number of white Americans. There are a great many somewhat more recent studies of the impact of interracial schooling, that are not studies of the desegregation per se, which have implications for understanding certain aspects of school desegregation. Although this review will focus on the impact of desegregation as it is most strictly construed, it will also utilize studies comparing students in segregated and racially-balanced environments when they seem pertinent.

A second major difficulty in assessing the impact of desegregation on students is that resegregation within formally desegregated schools is common (Desegregation Studies Unit, 1977). Resegregation can stem from many factors as varied as traditional school practices with regard to ability grouping and tracking, federally mandated programs such as special education, compensatory education, or bilingual education, and student's own fears or prejudices (Desegregation Studies Unit, 1977; Epstein, 1985; Eyler, Cook, & Ward, 1983; Schofield, 1982; Schofield & Sagar, 1979; Sullivan, 1979). Resegregation is not only a problem in situations involving blacks and whites. It often occurs in desegregation involving Hispanics as well (Carter, 1979; Parsons, 1965). In fact, the need to educate appropriately children who are not proficient in English poses a special challenge which can lead to the resegregation of many Hispanic students if it is not handled with care (Aspira of America, 1979; Orfield, 1978).

Sometimes resegregation is quite extreme. Yet researchers often take little cognizance of this fact.

For example, Cohen (1975) reported in her review of the literature on desegregation and intergroup relations that only one-fifth of the studies done between 1968 and 1974 reported on whether there was actual interracial contact in the school studied. Thus, in cumulating studies of desegregated schools it is often impossible to assess the extent to which students experienced desegregation at the classroom level. Yet this is the very sort of desegregation which research and theory suggests is most likely to have positive consequences.

Recognizing the Implications of Diversity

Desegregation is a political and legal concept. But situations which may be identical in the sense that they are all legally desegregated may vary tremendously in what they are actually like. In addition to varying in the degree to which resegregation occurs, they may differ dramatically in the relative proportions of white, black, Hispanic, and Asian students, the social class of the students, the extent to which there are initial social class and academic differences between different racial and ethnic groups, etc. There is reason to believe that differences such as those just mentioned will have an impact on desegregation outcomes. For example, research suggests that the ratio of black to white in a desegregated situation is related to intergroup attitudes (Dentler & Elkins, 1967; McPartland, 1968; Rosenfield, Sheehan, Marcus, & Stephan, 1981; St. John & Lewis, 1975; U.S. Commission on Civil Rights, 1967). There is also some evidence that both academic achievement and interracial friendship patterns are sometimes influenced by whether black students attend a desegregated neighborhood school or a more distant desegregated school (Howell, 1983; St. John & Lewis, 1975; Willie, 1973; but see Rosenfield, Sheehan, Marcus, & Stephan, 1981 and Weinberg, 1977, for different views on this issue). Hence, it seems likely that the wide variation in the racial mix of the schools studied and in the schools' community settings contributes substantially to making it difficult to draw any overall conclusions about the impact of desegregation.

Work in the field of evaluation research suggests that even desegregated situations which may appear similar in terms of criteria such as those mentioned above may vary tremendously in the degree to which and in the way in which they are implemented (Cook & Campbell, 1976; Guttentag & Struening, 1975). Thus, even if one program looks superficially like another, one cannot safely assume that they actually take similar shape. This fact has important implications for the interpretation of large-scale studies that analyze outcome variables in a number of segregated and desegregated schools and conclude that desegregation has no impact. Indeed, it could be that desegregation has an impact that is masked because of variations in outcome due to uncontrolled differences in implementation.

Alternatively, the positive impact of desegregation in some schools' classrooms might be counterbalanced by the negative impact in others. Sometimes investigators recognize these kinds of problems. More often, however, the problem is completely ignored.

The preceding comments about the diversity of desegregation programs and even of the ways in which apparently similar programs can be implemented give rise to an important characteristic of this review. When it is possible, as previously mentioned, I will attempt to differentiate between different kinds of desegregated situations and their effects. Thus, in addition the exploring the question of what, if any, conclusions can be drawn overall about the impact of desegregation, I will also deal to some extent with the issue of what is known about effective desegregation strategies and techniques.

Facing the Reality of Methodological Problems in Desegregation Research

Yet another issue which impedes assessing the impact of desegregation is the myriad of design and measurement problems which researchers face. As Crain (1976) has pointed out, there are strong pressures on researchers involved with studies on desegregation to complete their work rapidly. Hence, for a variety of reasons, including the fact that cross-sectional studies are generally less expensive than longitudinal studies, the large majority of the research dealing with the impact of desegregation is cross-sectional (i.e., compares different groups of students with varying degrees of exposure to desegregation) rather than longitudinal (i.e., measures the same group or groups of students at various points in time, usually before and after desegregation). Rather ironically, for technical reasons, cross-sectional data which are attractive to policy makers because of the relatively low cost and quick payoff do not allow one to make the causal inferences with which policy makers are frequently concerned.

Although longitudinal studies have a distinct advantage over cross-sectional studies, they too frequently have serious problems. First, one must have substantial financial resources and long-term cooperation from a school district. The pressures and difficulties of doing long-term work are so great that very few desegregation studies span more than 1 year. Although occasional studies do span 2-5 or more years (e.g., Bowman, 1973; Gerard & Miller, 1975; Laird & Weeks, 1966; Savage, 1971; Schofield, 1979, 1982; Smith, 1971) they almost inevitably tend to encounter potentially serious problems. For example, in the 3 years between 1966 and 1969 Gerard and Miller (1975) lost approximately one-third of their original sample. The tendency of longitudinal studies to cover short periods at the beginning of students' desegregated schooling severely limits the extent to which it is appropriate to generalize from their findings.

Many longitudinal studies of desegregation also employ no control group. Rather, they simply

measure a group of students before and after desegregation. The importance of having control groups in such longitudinal studies is heighted by the fact that there are both age trends and historical trends in many of the variables most frequently studied as outcomes of desegregation. For example, numerous studies suggest that black and white children generally interact less with those of the other race as they grow older (Aronson & Noble, 1966; Deutschberger, 1946; Dwyer, 1958; Shrum, Cheek, & Hunter, 1988; Trager and Yarrow, 1952). Hence, changes in interracial attitudes owing to age may be confused with changes resulting from desegregation unless a control group is available to which the desegregated group can be compared.

Desegregation studies are also often plagued by self-selection problems at the institutional and the individual level that limit one's ability to draw accurate conclusions. As Pettigrew (1969b) points out, schools that agree to make themselves available to researchers interested in desegregation are probably not representative of all desegregated schools in general. For example, a number of districts,including Cleveland, Chicago, and Los Angeles, which are often regarded as having serious problems, refused to permit their students to participate in a major federal survey of desegregated schools even such participation was ordered by Congress in the Civil Rights Act of 1964 (Pettigrew, 1969a). Similarly, children whose parents refuse to let them participate in research on desegregation may well be different in important ways from those who do participate.

In sum, any review of the literature on the effect of desegregation on outcomes such as academic achievement or intergroup attitudes must face the reality that much of the research is flawed in one way or another. However, it does appear possible to draw some conclusions from it and that is the task to which the paper will now turn. Because the amount, quality, and typical problems of research on different outcomes of desegregation differ markedly, I have not adopted one set of standards which will be applied across the board to determine whether a study is sound enough to be utilized in this review. Rather, in each section I will provide the reader with information on the data base on which the conclusions in that section rest.

The Effect of School Desegregation on Academic Achievement

There has been a great deal of research on the academic impact of school desegregation. An obvious reason for this was the expectation on the part of many majority and minority group members alike that school desegregation would enhance the achievement of minority pupils which has clearly lagged behind that of whites (Arias, 1986; Howard & Hammond, 1985). The reasons given for this

expectation have been many and varied. Some are relatively straightforward, like the theory that the relatively superior facilities and better educated staffs available in many previously all white schools should enhance achievement. Others are more complex and psychologically oriented. For example, a number of social scientists have put forward variations on a theory that Miller (1980) has called the lateral transmission of values hypothesis -- the idea that minority groups coming into contact with whites, who are often from more middle class backgrounds, would be influenced by their middle class peers' stronger orientation toward achievement (Coleman et al. 1966; Crain & Weisman, 1972; Pettigrew, 1969b). Recent research has not lent credence to this notion (McGarvey, 1977; Miller, 1980; Patchen, 1982). However, there are enough remaining plausible ideas about why and how desegregation might influence minority group achievement to make the issue worthy of investigation.

Although research on desegregation and achievement has focused primarily on desegregation's impact on black students, a number of studies have also addressed its impact on white students. Very little information is available about the impact of desegregation on Hispanic's students' achievement (Weinberg, 1977).

School Desegregation and Black Math and Reading Achievement

The past fifteen years have seen a large number of reviews of the literature on desegregation and black achievement, most of them relatively recent (Armor, 1984; Bradley & Bradley, 1977; Cook, 1984; Crain, 1984a; Mahard & Crain, 1983; Krol 1978, Miller & Carlson, 1984; Stephan, 1978, 1984; St. John, 1975; Walberg, 1984; Weinberg, 1977; Wortman, 1984). These reviews will constitute the basis for the discussion of desegregation and black achievement presented here.

The earliest of the reviews just cited was conducted by St. John (1975) who examined over sixty studies of desegregation and black achievement. She included at least four different kinds of desegregation in her review-- desegregation occurring through demographic changes in neighborhoods, through school board rezoning of districts or school closings, through voluntary transfer of pupils through open enrollment or bussing, and through total district desegregation. Although she classified studies by their design features she did little or no selection of studies on methodological criteria. St. John (1975, p. 36) concluded that "adequate data has not yet been gathered to determine a causal relation between school racial composition and academic achievement." The data did make it clear, however, that neither black nor white children suffer academically due to desegregation. Finally St. John found some indication that younger black children, especially those of kindergarten age, tend to benefit more academically from desegregation than older ones.

Weinberg (1977) reviewed 23 studies of black achievement in interracial schools and another 48 studies of desegregated schools -- i.e. those in which the interracial nature of the student body was a consequence of a conscious policy designed to end segregation. Like St. John's, his review did not select studies on strict methodological criteria. Weinberg concluded that the majority of studies of both kinds indicated improved minority achievement, although a substantial proportion reported no effect. Again there was no evidence at all of academic harm. Stephan's (1978) review came to a similar but not identical conclusion. He reported that the majority of studies suggested no impact, but that a substantial number suggested positive outcomes. Like previous reviewers, Stephan concluded there is no evidence at all of academic harm to black students from desegregation.

Bradley and Bradley's (1977) conclusions can be seen as agreeing to some extent with all of these positions. Specifically, they agree with Weinberg that a majority of the studies conclude that desegregation has positive effects on black achievement. However, they note that each of the studies showing positive effects suffers from methodological problems. Similarly, though, they criticize most of the studies showing no effect. Thus they end up agreeing with St. John that the evidence is inconclusive, but that it suggests no effect or a positive one rather than a negative one. This is in many ways similar to Stephan's conclusion. One other feature of this review should be noted. Interestingly, all of the studies of open enrollment plans and "central schools," defined as desegregated schools in small cities which house all of a school system's students in given grades, show positive effects. In contrast, relatively few of those in which desegregation was achieved by school closing or bussing show gains. However Bradley and Bradley do not interpret these patterns as having any real significance because the number and quality of studies varies so much from one type of desegregation to another.

Krol's (1978) review was the first to apply formal meta-analytic techniques to the literature in this area. Meta-analysis provides a formal statistical method for combining results from different studies (Glass, McGaw & Smith, 1981; Rosenthal, 1978). Thus, Krol (1978) differs from the reviews just discussed in that it yields specific statistical estimates of the desegregation's impact. Krol concluded overall that the average effect of desegregation on black achievement is .16 standard deviations, which can be understood more meaningfully as from 1 1/2 to 3 months gain per academic year. (The amount of gain depends on the kind of test). The subset of studies with good control groups yielded a more modest estimate of .10 of a standard deviation in gain. However, it must be noted that although these estimates are both positive they are not statistically significant -- that is, typical canons of quantitative analysis would not allow one to conclude that there is an unambiguous positive impact of desegregation on achievement

from these data.

The last of the pre-1984 reviews was a meta-analysis authored by Mahard & Crain (1983). These reviewers utilized a group of 93 studies including, atypically, some in which ability measures, such as IQ, were utilized as the dependent variable. The mean effect size in Mahard and Crain's (1983) review was .08, very similar to that produced by Krol for the "better studies." However, these reviewers argue that this underestimates desegregation's real potential since this estimate is based on studies which included those of students transferred from segregated to desegregated systems as well as those of students who have experienced only desegregated education. Examining 23 studies which compared the achievement of desegregated black students in kindergarten and first grade with that of their segregated peers, Mahard and Crain found a much larger effect, .25 of a standard deviation, roughly one-third of a grade level. Also of note was the finding that studies using measures of ability, like IQ, found improvement similar to those which utilized achievement measures (Mahard & Crain, 1983).

In 1984 the National Institute of Education commissioned meta-analytic review papers from seven scholars to examine the impact of school desegregation on black academic achievement. These individuals agreed on a set of methodological criteria to be utilized in selecting a core group of studies for inclusion in their analyses. Then each proceeded to conduct a meta-analysis and to write up a paper detailing his conclusions. Three of the reviews are precisely what one would expect from the foregoing description, although individual authors tended to add or delete a few studies from the core group of 19 (Armor, 1984; Miller & Carlson, 1984; Stephan, 1984). Although Walberg (1984) presents the results of a meta-analysis of the core studies, his emphasis is on comparing the impact of desegregation with other educational policies or practices. Wortman (1984) reports a meta-analysis on a group of 31 studies which he felt were worthy of inclusion as well as one performed on the basic 19. Crain's (1984a) review challenges the wisdom of selecting only 19 studies for review on a number of cogent grounds. Cook's (1984) paper examines the six others and asks what overall conclusions flow from the project as a whole. Thus we will focus on Cook's paper, referring to the others where necessary. However, before turning to that I will discuss an important issue raised by Crain's paper.

Crain's major point is that the panel's procedures for selecting the core studies led them inadvertently but systematically to underestimate desegregation's effect. Specifically, the panel selected longitudinal studies, rejecting cross-sectional survey studies as methodologically inferior. They also decided to reject those longitudinal studies which used different pre- and post-tests. However, utilization of these inclusion criteria almost automatically results in exclusion of virtually all of the studies of

desegregation conducted with kindergarteners and first graders. Since very young children enter school without much in the way of formal math or reading skills, pretests for these age groups measure "readiness" as opposed to achievement which is measured by the posttests. Thus, longitudinal studies of these age groups are characterized by measurement practices which disqualified them from inclusion in the core set of studies. Crain demonstrates that studies of children of these grade levels, no matter what their design, yield both larger estimates of desegregation's impact and more consistently positive results than studies with other age groups. Furthermore, he argues that these studies are representative of the kind of desegregation most children experience, pointing out that most desegregation plans desegregate children from kindergarten or grade 1 on up. This means that in the early years of a desegregation program, when research is most likely to be carried out, older children enter desegregated schools having prior experience with segregated education. Their experience is thus quite different from that of the children who follow them, who will start in desegregated rather than in segregated schools just as the kindergarten and first grade students in the rejected studies did.

Cook (1984) concedes that Crain has raised an important issue, but fails to concur that the panel has made a fundamental error. He points out that a number of the studies Crain discusses stem from one voluntary desegregation program, Project Concern, and thus questions the generality of Crain's conclusions. In addition, he notes some possible technical problems in Crain's analysis. I am inclined to give more credence to Crain's concerns than Cook does for two reasons. First, it seems to me eminently plausible that transferring from a segregated to a desegregated school might cause some adjustment problems which would not occur if one started school in a desegregated environment. If one wants to know the effect of desegregated schooling in general, it seems unwise to focus on students who have had to make a transition, especially if the study measuring desegregation's impact is carried out very close to the time of transition. Secondly, the technical criticisms which Cook raises with regard to Crain's work do not seem to me to challenge Crain's basic conclusion. In sum, Crain's paper raises the very real possibility that the panel has somewhat underestimated the academic impact of desegregation. This caveat should be kept in mind as I proceed next to summarize the results of the panel's work.

Cook (1984) ends his paper with several conclusions based on his own analyses and his examination of the other commissioned papers. Since these conclusions seem to be a generally fair summary of the project's overall outcome I will structure the following discussion around them. First, consistent with every other review of which I am aware, Cook concludes that desegregation does not undermine black achievement. None of the individual 1984 papers even suggested a negative impact of

desegregation on black achievement.

Secondly, Cook concludes that on the average desegregation did not lead to an increase in the mathematics achievement of black students, a conclusion consistent with that of Armor (1984), Miller & Carlson (1984) and Stephan (1984). Wortman reported a small positive effect on math in the core studies and larger one on his set of 31 studies. Crain (1984a) and Walberg (1984) do not deal with the distinction between reading and mathematics gains in any detailed way.

In contrast to the situation with mathematics, Cook concludes that desegregation does increase the mean reading level of black students. All of the panelists who dealt with the issue agreed that reading gains occurred. Their estimates ranged from .06 to .26 of a standard deviation which translates into roughly a two to six weeks gain. These gains were generally computed per study rather than per year. Interpreting this gain is complex. First, one can think of it as a rough estimate of what is gained in a year of desegregation, since most of the studies included in the core group spanned just one year. On the other hand, there is no evidence to justify multiplying this effect by twelve to estimate gain over a student's entire elementary and secondary career. In fact, there is some counter evidence (Mahard & Crain, 1983). While the small number of studies spanning two years tended to find larger effects than those covering just one, the reverse was the case for the three studies which lasted three years. Further, the majority of the studies in the core covered the first year of desegregation which may differ from later years in important ways, including its impact on achievement.

Cook also urges some caution in interpreting these results for the following reason. Although some mean or average gain seems clearly present, other methods of looking at the data do not lead to such an optimistic conclusion. Specifically, the median scores found in these reviews, the scores which have an equal number of scores above and below them, were almost always greater than zero but lower than the means. Also, the modal gain scores, the most frequently found scores, were near zero. The explanation for these apparently somewhat contradictory findings is that all of the analyses included some studies with unusually large gains. Such gains contributed substantially to raising the overall means. However, they had a much less potent effect on the medians and modes.

These somewhat technical distinctions are worth making because of their implications for the interpretation of the data. Specifically, the gain in mean reading scores suggests that desegregation, on the average, will bring academic benefits. However, the less impressive results for the medians and modes suggest that not all instances of desegregation will lead to academic gains.

The fact that some schools show atypically large gains supports the point made earlier that

desegregation is a very varied process and that different instances of this process can be expected to have very different outcomes. It also suggests the potential utility of systematically exploring the achievement research to see if certain types of desegregation experiences tend to be associated with particularly large or small achievement gains. This task is difficult to achieve with the NIE sponsored reviews for several reasons. First, the core group included only 19 studies, and these studies were of quite similar situations. Specifically almost all of them involved just one or two years of desegregation, making comparison between initial and later gains difficult. Similarly, fifteen of the nineteen core studies were of voluntary desegregation, making comparison between voluntary and mandatory programs problematic. Nonetheless, these reviews and others, especially Mahard and Crain (1983), do give some tentative indications about the characteristics of desegregation programs which may have a more positive impact on academic achievement than others.

One suggestion which emerges repeatedly in the reviews is the idea that desegregation may be most effective when carried out in elementary school, most especially in the early elementary years (St. John, 1975; Cook, 1984; Crain, 1984a; Stephan, 1984). Crain (1984a) and Mahard and Crain (1983) present the most detailed discussion of this issue and make the strongest case for the benefits of desegregation during the very early elementary school years. First, Mahard and Crain (1983) point out that all 11 samples of students they examined which began desegregation in kindergarten and over 3/4's of the 44 groups of students they examined who were desegregated as first graders showed achievement gains. In sharp contrast, roughly 50% of the samples of students in the more advanced grades did so. In addition, the estimated effect size of the changes for the kindergartners and first graders is greater than those previously discussed, being .25 of a standard deviation or roughly equivalent to one-third of a year in school. Thus Mahard and Crain (1983, p. 125) conclude that the academic "effects of desegregation are almost completely restricted to the early primary grades." As discussed previously, Cook (1984) raises several technical issues which somewhat weaken the apparent strength of Mahard and Crain's data. Yet Cook's own analysis of the NIE core studies supports the idea that early desegregation is the most beneficial by demonstrating gains which are largest in the second grade and which tend to decrease markedly thereafter.

There is also some indication that the type of desegregation program may make a difference in achievement effects. Mahard and Crain (1983) present data suggesting that metropolitan desegregation plans may have stronger achievement effects than others. This finding is consistent with the suggestion made by Cook (1984) and Stephan (1984) that voluntary plans may have a greater impact than

mandatory ones, since virtually all of the metropolitan plans in Mahard and Crain's sample involved the voluntary transfer of black students from inner city to suburban schools. Their finding are also consistent with Bradley and Bradley's (1977) finding that all the studies of open enrollment programs, another kind of voluntary program, reported positive effects.

The search for other variables which influence the impact desegregation has on black students' academic achievement is greatly impeded by the lack of information about the characteristics of the schools studied as well as the methodological problems discussed earlier. Thus rather than speculate on the basis of single studies or inadequate groups of studies I will now turn to examining the impact of desegregation on Hispanic students' academic achievement.

School Desegregation and Hispanic Achievement

There is virtually no empirical evidence about the impact of school desegregation on the academic achievement of Hispanic students. The extent of our ignorance is illustrated in that several discussions of the impact of desegregation on Hispanic students cite no more than two or three studies (Carter, 1979; Weinberg, 1970, 1977). Furthermore, the few studies which I was able to locate deal exclusively with Mexican-Americans. Although Mexican-Americans and other Hispanic groups certainly share certain aspects of language and culture, there is tremendous diversity within the groups which fall under the label Hispanic (Arias, 1986; Development Associates, Inc., 1974; Orfield, 1986). Thus, it is a mistake to assume that research results coming from the study of one of these groups can be applied automatically to others.

The major published source of information on the impact of desegregation on Hispanic students is a large scale study conducted in Riverside, California in the late 1960's (Gerard & Miller, 1975). This massive longitudinal study included over 1,700 students, 650 of whom were Mexican-American. (The Riverside district was approximately 10% Mexican-American, 6% black, and 84% white.) The analyses presented in this study are numerous and somewhat complicated. However, the ultimate conclusion drawn is that desegregation did not significantly influence the achievement level of any of the groups, including the Mexican-American children.

Two other studies of the same general topic report more positive findings. In a study of over 1,500 Mexican-American junior high school students, Kimball (cited in Weinberg, 1977) concluded that the percent of Anglo students directly and positively influenced minority-group achievement. Feshbach and Adelman (1969) studied the achievement gains of black and Mexican-American junior high school boys bussed to a university-based private school. Both groups of minority students gained markedly in

achievement compared to a control group.

In summary, in some ways the data on the impact of desegregation on Hispanics, while extremely fragmentary, is consistent with the information on its impact on black achievement. Results appear to be either neutral or positive. However, whereas the preponderance of evidence suggests a positive outcome for blacks, the most extended and sophisticated study of Hispanics does not. Clearly more research is needed before any conclusions can be drawn.

One further issue needs to be dealt with before leaving this topic. It is not uncommon for discussions of desegregation's impact on Hispanics to discuss the literature on its impact on blacks and then to either assume or to make explicit assertions that "there is no reason to believe the outcomes (of desegregation) for (Hispanics) differ" (Carter & Segura, p. 325). This assumption ignores two potentially very important differences. First, a substantial number of Hispanic children may know little if any English when they first enter school. The proportion of Hispanic students whose first language is Spanish varies from area to area, as does the proportion who also know little or no English. However, it is clear that many Hispanic students face a language barrier in schools that blacks do not (Arias, 1986). Second, to the extent that culture influences students preparation for and reaction to schooling, Hispanic children may be different from blacks, as indeed different segments of the population labelled Hispanic may differ from each other.

It is clearly beyond the scope of this paper to evaluate thoroughly how the linguistic and cultural differences which exist between black and Hispanic Americans may effect desegregation's impact. However, it is important to note that constructive thought has been given to the issue of how one can handle the needs of children who are not proficient in English while at the same time avoiding racial and ethnic isolation (Carter, 1979; Carter & Chatfield, 1986; Fernandez, 1978; Fernandez & Guskin, 1978; Garcia, 1976; Gonzalez, 1979; Haro, 1977; Heisen, 1987; Milan, 1978; National Institute of Education, 1977).

School Desegregation and White Achievement

There are a substantial number of studies on the impact of desegregation on white students' achievement, although nowhere near the number which have looked at black students' achievement. This situation is hardly surprising since desegregation is often seen as a strategy for improving the achievement of minority group students and there is little reason to expect, in general, that desegregation in and of itself will improve the academic achievement of white students. However, the issue of the impact of desegregation on white achievement is important since one of the major concerns often

expressed by whites opposing desegregation is that it will undermine their children's academic progress. Whether this concern is based on knowledge about the link between school social class and student achievement level (Coleman et al., 1966) or on racial prejudice it is sufficiently widespread that the issue merits close attention in a review of this sort.

The major review available on desegregation and white achievement is St. John's (1975). There is also an earlier review of the literature by Weinberg (1970). Although these reviews were completed substantially more than a decade ago, they are not as dated as one might assume since there has been relatively little research produced on this topic since St. John's review was completed. Thus, I will present a summary of Weinberg's and St. John's conclusions and then briefly cover the most important studies relevant to this topic which have been published since those reviews.

After examining dozens of studies, many of which had serious methodological flaws, Weinberg (1970, p. 88) concluded that "white children fail to suffer any learning disadvantage from desegregation." This finding is consistent with every other summary statement on this issue of which I am aware. For example, Orfield (1978, p. 124) wrote "What is remarkable, however, is the consistency of the finding that the desegregation process itself has little if any effect on the educational success of white students, as measured by achievement test scores . . . Researchers operating from very different scholarly and idiological starting points support this general finding."

St. John's (1975) extensive review of both published and unpublished studies of the impact of school desegregation on white achievement turned up 24 studies. Many of these studies, like those Weinberg reviewed, do not meet strict standards of methodological rigor. However, the pattern of results is very clear. The overwhelming majority of the studies suggest no impact in either direction. When statistically significant effects do appear, they are more often positive than negative. However, the overall patterns were such that St. John concluded, "Desegregation has rarely lowered academic achievement for either black or white children" (p. 36). This is true not only for studies of situations in which blacks have been bussed to previously white schools but also for the few available studies of situations in which white children were bussed to previously black schools.

The only two major studies of which I am aware of desegregation and white achievement not covered in the Weinberg and St. John reviews do little to change their overall conclusion. The first of these, Singer, Gerard, and Redfearn (1975), concludes on the basis of the massive study in Riverside, California described above that desegregation has no effect on white students' achievement. For example, this study found that the standardized reading achievement scores of elementary school

students stayed consistent from the pre-desegregation time period to post-measures taken from one to five years after desegregation. The second study, Patchen (1982), also concludes there is little relation between the racial composition of the schools students attend and white academic achievement. Patchen did find some indication that white students who had attended majority black elementary schools had lower achievement scores in high school than their peers who had attended majority white schools, but the effect was very slight (one percent of the variance in such scores). He concluded with regard to high school racial composition that "there were no substantial associations between the average grades or the average achievement scores of whites and the racial composition of their schools" (p. 303), although he did find some decrement in academic effort in whites in majority black schools.

The Effect of School Desegregation on Drop-Outs and Suspensions

Both suspensions and drop-outs seem bound to influence the academic achievement of students since a student not in school for either reason misses the opportunity to learn material presented to those in school. Furthermore, dropping out means, of course, that a student must face the job market without a high school diploma, a situation which virtually guarantees difficulty in attaining a stable job with any prospect of economic security. Thus, in addition to examining the impact of school desegregation on academic achievement, this review will also consider its impact on suspension and drop-out rates.

It is clear that black children are suspended from school much more frequently than whites and Hispanics. In fact, black children are from two to five times more likely to be suspended than whites (Children's Defense Fund, 1974; Arnez, 1978, Kaeser, 1979). In contrast, the available data suggest that the suspension rate for Hispanic children is generally not disproportionately high (Arnez, 1978; Eyler, Cook, & Ward, 1983). In fact, it may be lower than for other groups (Aspira of America, 1979). However, both black and Hispanic students are clearly more likely to drop out of school than whites. National statistics indicate a dropout rate during the high school years of 10% for whites and 15% for blacks (National Center for Educational Statistics, 1981). Dropout rates for Hispanic students are even higher than those for blacks and have shown a steady increase (Arias, 1986). The National Commission on Secondary Education for Hispanics (1984) reported a 45% dropout rate for Hispanic students.

Although the disparity in white and minority rates of suspension and dropping out is a serious issue in and of itself, the real issue for the purposes of this review is whether desegregation influences either of these phenomena. There is not nearly as much material available on this question as on the question of

how desegregation influences academic achievement. However, the studies that exist suggest, perhaps surprisingly, that desegregation has somewhat opposite effects on these two phenomena.

Frequently desegregation is accompanied by a marked increase in the student suspension rate (Arnez, 1978; Eyler, Cook & Ward, 1983). In extreme cases suspensions may double (Project Student Concerns, 1977; Foster, 1977). There is reason to believe that such increases may be limited to the first year when concern about desegregation is apt to be very high (Trent, 1981). However, it is not clear whether the decline in suspensions frequently averred to occur after the first year of desegregation returns the situation to the predesegregation status quo or not. A study performed by Aspira of America (1979) concluded that suspension rates for both Hispanics and non-Hispanics are lowest in highly segregated districts and that Hispanic suspension rates were highest in moderately segregated districts. However, since important control variables were omitted from this analysis, extreme caution must be utilized in interpreting these data.

To my knowledge there is very little evidence about whether desegregation disproportionately increases the suspension rates for minority students, but there are some indications that this may be the case. For example, Larkin (1979) reports that schools in Milwaukee which were desegregated after a court-order and went from being virtually all white to being 15-34% black showed both a marked increase in overall suspensions and an unusually high disparity in black/white suspension rates compared to previously integrated schools in the same city. Kaeser (1979) shows that, in spite of similar suspension rates for black and white students in highly segregated schools in Cleveland, blacks are disproportionately suspended in virtually all the racially-mixed schools in that city. It appears that the degree to which desegregation influences the suspension rate for black students may be linked to the racial composition of the desegregated school. Specifically, Eyler, Ward, and Cook (1983) discuss several studies which taken together suggest that recently desegregated schools which have a racially-balanced student body are especially likely to have disproportionately high suspension rates for black students.

There appear to be even fewer studies of desegregation and dropping out than of desegregation and suspension, but a few are available. Bachman (1971) found that Northern black students attending desegregated schools were less likely to drop out of high school than those in segregated schools. However, the meaning of this finding is clouded by the fact that they also came from homes of higher socio-economic status. Crain and Weisman (1972) report a strong relation between school integration and high school graduation for northern blacks even after controlling for factors such as parents'

education. In fact, they state flatly, "integration seems to reduce the dropout rate by one-fourth (p. 156). The only study of which I am aware which suggests that desegregation increases the dropout rate for minority students in the North is the Aspira of America (1979) study cited earlier which found lower dropout rates in highly segregated schools than in moderately segregated schools. This finding contrasts sharply with a study by Hess and Lauber (1985) which concluded that the dropout rate for Hispanic students in Chicago was highest in very segregated minority schools. A rather different study explored the relative dropout rate of minority students in different kinds of desegregated schools. (Felice & Richardson, 1977). It concluded that minority students were less likely to drop out of school where their peers were of relatively high socioeconomic status and where teachers had relatively positive attitudes about the minority students' capabilities than in other kinds of schools. Perhaps not surprisingly, Aspira of America (1979) reports that where major bilingual programs are offered, dropout rates for Hispanic students appear to be reduced.

In summary, although these date are quite sparse, there is reason for concern about the possible increase in the suspension of black (and possibly Hispanic) students, especially in the first year or so of desegregation. On the other hand, desegregation, especially to schools of higher socioeconomic status, may curb the disproportionately high dropout rate of black and Hispanic students, perhaps an ultimately more important issue.

Post-Secondary Educational Outcomes of School Desegregation

As indicated earlier, there has been a great deal of research on the impact of desegregation on achievement test scores. However, it is important not to overemphasize achievement scores as an end in and of themselves. There is clear evidence that achievement scores are, at best, fairly weak indicators of college grades or occupational success (Jencks, et al., 1972; Marston, 1971; McClelland, 1973). It is reasonable to argue that such scores have received disproportionate attention because they are widely administered and hence convenient rather than because they are an outcome of premier importance.

In the past decade or so the work of a small group of researchers, most notably Braddock, McPartland and Crain, has opened up a new and potentially very important line of inquiry-- the impact on desegregation on later life outcomes for minority students such as college choice and occupational attainment. Braddock & Dawkins (1984 p. 367) make the case for this line of inquiry by pointing out that desegregation may have long-term social and economic consequences for minorities by providing "(1) access to useful social networks of job information, contacts and sponsorship; (2) socialization for

aspirations and entrance into 'nontraditional' career lines with higher income returns; (3) development of interpersonal skills that are useful in interracial contexts; (4) reduced social inertia -- increased tolerance of and willingness to participate in desegregated environments; and (5) avoidance of negative attributions which are often associated with 'black' institutions (Crain, 1970; Crain & Weisman, 1972; McPartland & Crain, 1980; Braddock, 1980; Braddock & McPartland,1982; Coleman et al., 1966)."

The evidence concerning desegregation's impact on such outcomes is quite sparse and virtually all of it concerns such outcomes for blacks, rather than for members of other racial or ethnic groups. Furthermore, almost all of these studies explicitly or tacitly use the word desegregated as a synonym for racially mixed. Thus they are generally not studies of the outcomes of specific court-ordered desegregation programs. Yet I believe these studies are well worth discussing because of the fundamental importance of such outcomes -- to minority groups members in particular and to American society in general.

Braddock and Dawkins (1984) point out that school desegregation can influence the amount and the type of post-secondary education blacks receive, their academic success in the post-secondary years, and their chances of attaining a well-paying job. For none of these outcomes is the evidence so clear cut that the issue of desegregation's impact can be definitively settled. Yet, some data suggestive of positive effects are available.

The data on the impact of desegregation on the amount of post-secondary education blacks complete seems to depend on the part of the country under consideration. Given the purpose of this review, I will focus on outcomes for Northern blacks. Crain and Weisman (1972) utilized retrospective data to explore college attendance and completion patterns in a relatively small sample of Northern black adults. They found that roughly one-third of the black males from desegregated schools went to college compared to 24 percent from segregated schools. Segregated and desegregated black females evidenced much smaller differences in the same direction. College completion rates were also higher for black males and females with desegregated schooling at the elementary or secondary level than for their segregated peers. Crain and Weisman's analysis suggests that these patterns were not due to initial differences in the family background of individuals attending segregated and desegregated schools.

In another study, Crain and Mahard (1978) explored similar issues with a data base more adequate to the job. Using data on 3,000 black high school graduates, they replicated the earlier suggestion of benefits of desegregation to Northern blacks finding that desegregation was associated with college enrollment and persistence for these individuals. Braddock and McPartland (1982) utilized this same data

base merged with later follow-up surveys to explore the same issue. Not surprisingly their results are moderately consistent with Crain and Mahard's. They found a weak trend suggesting a positive impact of desegregation on years of college completed for Northern males. Since the studies just mentioned constitute, to my knowledge, most of those which deal with the impact of desegregation on the amount of post-secondary education blacks complete, it seems reasonable to conclude that the impact of desegregation on college attainment is positive, though not strong, for Northern blacks. There is some indication of a similar phenomenon for Hispanics in data which are at this point not completely analyzed (J. Mercer, personal communication, November, 1988). A study by Heller (1969) which found higher occupational aspirations among Mexican-American males in predominantly Anglo schools than among their peers in predominately Mexican-American schools suggests one factor which might contribute to this phenomenon.

Another issue which these researchers have explored is whether desegregation leads blacks to be somewhat more likely to attend predominately white colleges rather than predominately black colleges. The researchers working in this area tend to argue that such an outcome is valuable since attendance at predominately white institutions of higher education tends to have positive job market consequences for several reasons. For example, recent research has documented the importance of desegregated social networks for job attainment (Braddock & McPartland, 1987). In addition, it is also clear that some employers tend to derogate degrees received from black institutions and to prefer black graduates from white institutions (Crain, 1984a; Braddock & McPartland, 1983; McPartland & Crain, 1980). Such factors may be at least partly responsible for indications that black graduates of white institutions, especially black male graduates, earn more than roughly equivalent graduates from black institutions, (Braddock, 1985).

There are two studies which suggest that desegregation at the pre-college level encourages black students to enroll in predominately white colleges (Braddock, 1980; Braddock & McPartland, 1982). The first showed a fairly strong positive relation between attending a desegregated high school and enrolling in a predominately white college. However, the number of students and colleges involved in this study, which was carried out in one southern state, was relatively small. More convincing evidence comes from a second study based on the data from 3,000 black high school graduates. Utilizing controls for variables such as the student's social class background and high school grades, this study found that attendance at predominately white institutions was more likely for students who had had prior experience with desegregation than for others. Braddock and McPartland (1982) interpret this as evidence that prior

desegregation experience frees black students to risk attendance at a predominately white institution, the only readily available kind of four year college for most Northern blacks.

Of course, one of the major reasons there is interest in whether school desegregation influences the kind and amount of college education obtained by minority students is that this has an important bearing on occupational outcomes. Direct evidence of a link between desegregation and later occupational attainment is beginning to accumulate. The first empirical evidence of which I am aware on this topic appeared in studies by Crain (1970) and Crain and Weisman (1972). These reports, based on the same set of survey data, concluded (Crain & Weisman, 1972, p. 161) that "Alumni of integrated schools are more likely to move into occupations traditionally closed to blacks; they also earn slightly more money, even after education is controlled." Perhaps one factor accounting for this is that employers show relatively favorable attitudes toward hiring minority group graduates of suburban high schools (Braddock, Crain, McPartland, & Dawkins, 1986). Thus, desegregation efforts which transfer students from urban to suburban settings would presumably have positive job market consequences for the minority students involved. More recently, several studies have focused on the impact of the racial composition of the college black students attend on their occupational attainment. Although the results vary somewhat from study to study, a recent review of this work concludes "On balance, black graduates (especially males) of predominantly white institutions seem to receive labor-market advantages over those from predominantly black institutions (Braddock, 1985, p. 18).

In summary, then, there are indications that attending desegregated schools may well have some impact on the kind of jobs blacks get as well as on the amount and type of college education they undertake. Although the evidence to date is sparse, these outcomes are of such importance that any reliable indication they are influenced by desegregation is of considerable importance.

The Effect of School Desegregation on Black Self-Concept

A considerable body of research has explored the impact of school desegregation on black children's self-esteem. There is very little comparable data on its impact on the self-esteem of other groups of whites and Hispanics although a few exceptions to this generalization can be found (Sheehan, 1980; Green, Miller, & Gerard, 1975). However, recent work has suggested that the belief that black children in segregated environments have low self-esteem, which sparked much of this research, may well not be accurate. Although this belief was widespread for a substantial period of time (Cross, 1980), the evidence supporting it appears flawed. First, there were some important methodological problems

which characterized many of the studies upon which this conclusion was based (Banks, 1976; Spencer, 1976). Second, Cross (1980) and others have pointed out that the interpretation of the findings from these studies has not been entirely consistent with the data. Reviews of relatively recent studies have generally concluded the blacks show the same or possibly higher levels of self-esteem as whites (Cross, 1980; Epps, 1978; Gordon, 1980; St. John, 1975; Taylor, 1976).

Thus the attention directed towards the issue of desegregation and self-esteem may have been out of proportion to the problem, at least in recent decades and possibly earlier. It does seem likely on a logical basis that a state enforced system of segregation might well undermine the personal and group self-regard of those subject to such a system. However, recent studies, at least, suggest that lack of self-esteem is not a major problem for today's black children. It also does not appear to be a major problem for Hispanic children (Carter & Segura, 1979, although some researchers have suggested that the self-esteem of Mexican-American students may be lower than that of Anglos [Mairy, 1968; Parsons, 1965]). Furthermore there is no strong reason to believe that desegregation under the conditions which many minority children have experienced would automatically increase self-esteem or regard for their own group. For example, Hare (1977) argues that one might expect to find a short term increase in personal and academic anxiety associated with desegregation since many minority children enter somewhat hostile environments and/or ones which provide increased academic competition.

The major reviews of school desegregation and black self-concept or self-esteem generally agree in concluding that desegregation has no clear-cut consistent impact on self-esteem (Epps, 1975; 1978; Stephan, 1978; St. John, 1975; Weinberg, 1977). For example, one of the most recent reviews cited a total of twenty studies of black self-esteem (Stephan, 1978). Five of these found that self-esteem was higher in blacks in segregated schools and the remaining fifteen suggested no statistically significant impact of desegregation. Although some of the other reviews, most notably Weinberg (1977), present a somewhat more positive view of the situation, none claim a consistent positive effect of desegregation on black self-esteem. Although there are almost no data available to test this proposition directly, Epps' (1975) suggestion that desegregation is likely to have a very varied effect on self-esteem depending on the specific experiences which students have seems eminently sensible.

The Importance of Exploring the Impact of School Desegregation on Intergroup Relations

As previously indicated, the lion's share of the research on the effect of school desegregation has focused on its impact on academic achievement. However, a fairly large body of research has also addressed the issue of its impact on intergroup relations, most especially on interracial attitudes. Although many of the parties concerned with desegregated schools tend to be relatively uninterested in how interracial schooling affects intergroup relations, there are some compelling arguments in favor of giving more thought to the matter. First, the fact is that much social learning occurs whether or not it is planned. Hence, an interracial school cannot choose to have no effect on intergroup relations. It can only choose whether the effect will be planned or unplanned. Even a laissez-faire policy concerning intergroup relations conveys a message -- the message that either school authorities see no serious problem with relations as they have developed or that they do not feel that the nature of intergroup relations is a legitimate concern for an educational institution. So those who argue that schools should not attempt to influence intergroup relations miss the fundamental fact that whether or not they consciously try to influence such relations, schools are extremely likely to do so in one way or another (Schofield, 1982).

Because of the pervasive residential segregation in our society, students frequently have their first relatively intimate and extended interracial experiences in schools. Hence, whether racial hostility and stereotyping grow or diminish may be critically influenced by the particular experiences students have there. While there may still be considerable argument about whether the development of close interracial ties should be a high priority in this country, there is a growing awareness of the very real societal costs of intergroup hostility and stereotyping. It is clear that under many conditions interracial contact can lead to increased intergroup hostility. Hence, unless interracial schools are carefully planned there is the very real possibility that they will exacerbate the very social tensions and hostilities that many initially hoped they would diminish.

A number of trends all suggest the importance of turning from an almost exclusive concentration on the academic outcomes of schooling and focusing at least some attention on non-academic outcomes such as intergroup relations. First, as previously mentioned, the long held assumption that academic achievement is the major determinant of occupational success has been seriously questioned and studies are now suggesting that interracial social networks may well have positive consequences for minority group members' job attainment (Braddock & McPartland, 1987). Second, the ability to work effectively

with out-group members is an important skill in a pluralistic society which is striving to overcome a long history of discrimination in education and employment. Many individuals lack this ability (Pettigrew & Martin, 1987), but population trends which suggest that an increasingly large proportion of the population will be composed of minority group members makes this an increasing important aspect of children's education. Third, Jencks et al. (1972) as well as others have suggested that more attention should be paid to structuring schools so that they are reasonably pleasurable environments for students. This viewpoint emphasizes that in addition to being agencies which prepare students for future roles, schools are also the environments in which many people spend nearly one third of their waking hours for a significant portion of their lives. This line of argument suggests that even if positive or negative interracial experiences do not cause change in interracial behaviors and attitudes outside the school situation, positive relationships within the school setting may be of some value.

Finally, there is the possibility that social relations between students in interracial schools may effect their academic achievement and their occupational success (Braddock & McPartland, 1987; Crain, 1970; Katz, 1964; McPartland & Crain 1980; Pettigrew, 1967; Rosenberg and Simmons, 1971; U. S. Commission on Civil Right, 1967). For example, Katz's (1964) work suggests that the academic performance of blacks may be markedly impaired in biracial situations which pose a social threat. The potentially constructive effect of positive intergroup relations on minority group outcomes is highlighted by Braddock and McPartland's (1987) finding that black high school graduates who use desegregated social networks in their job search are likely to attain positions with a substantially higher salary than are those who use segregated social networks. Perhaps not surprisingly they also work in environments which have, on the average, a higher percentage of white workers.

The Effect of School Desegregation on Student Intergroup Relations

This research on the impact of desegregation on intergroup relations can be roughly grouped into three basic categories. First, there are numerous studies which do things like (a) compare the attitudes of students in a segregated school to those of students in a similar desegregated school, or (b) look at changes in student attitudes and behavior associated with the length of time children have been desegregated. Such studies generally give relatively little information about the nature of the schools studied assuming implicitly that desegregation is an independent variable which has been operationalized similarly in a wide variety of circumstances. Such studies often contain analyses which examine the

impact of student background variables like race or sex on reactions to desegregation. However, they generally do not directly address the impact of specific policies or programs on students.

The second basic type of research in this area consists of large correlational studies which attempt to relate a wide range of school characteristics, policies, and practices to particular outcomes. Well-known studies of this kind are Patchen (1982), Forehand, Ragosta and Rock (1976), and a substantial body of work by Hallinan and her colleagues concerning the impact of a variety of classroom characteristics, such as classroom racial composition and size, on intergroup friendship (Hallinan, 1982; Hallinan, 1986; Hallinan & Smith, 1985; Hallinan & Teixeira, in press a, in press b).

A third type of research in this area experimentally investigates the impact of particular narrowly defined innovations on intergroup relations within desegregated schools, thus allowing fairly clear conclusions about the causal linkage between these innovations and student outcomes. The large majority of this work concerns various techniques for inducing cooperation between black and white students on various kinds of academic tasks. (For reviews see Johnson & Johnson, 1974, 1982; Johnson, Johnson & Maruyama, 1983; Sharan, 1980; and Slavin 1983a, 1983b). However, another substantial body of research both demonstrates how the gap in the status associated with the social categories of black and white in our society influences children's interaction patterns and explores ways of mitigating the impact of this status differential (Cohen, 1980; Cohen, Lockheed & Lohman 1976; Cohen & Roper, 1972).

There have been several reviews within the last decade or so of the first type of research on desegregation and intergroup relations - that linking desegregation and intergroup attitudes (Amir, 1976; Cohen, 1975; McConahay, 1978; St. John, 1975; Schofield, 1978; Schofield & Sagar, 1983) -- which is the most germane to this review. Such reviews tend to look at both studies of specific desegregation plans and of interracial schools, often without differentiating between them. Several themes reappear time and time again in these previous reviews. The first is dissatisfaction with technical aspects of much of the work. Since many of the specific problems were discussed in an earlier section of this paper, I will not reiterate them here. However, it is important to recognize the extent of these problems. For example McConahay (1979, p. 1) writes "In my own review of over 50 published and unpublished studies (on desegregation and intergroup relations) done between 1960 and 1978, I did not find even one true experiment and only four of the quasi-experimental studies had enough methodological rigor to make them worth reporting in any detail (Gerard & Miller, 1975; Schofield & Sagar, 1977; Shaw, 1973; Silverman & Shaw, 1973)."

A second theme common to most of the reviews is that the extant research on desegregation and intergroup relations does not allow confident statements that consistent effects exist. In fact, St. John's (1975) review captures the tone of many of the others in suggesting that the most striking feature of the research is the inconsistency of the findings. Many studies including a few studies of the attitudes of Mexican-American students (Farmer, 1937; DeHoyos, 1961) suggest that desegregation tends to lead to more positive interracial attitudes (Gardner, Wright, & Dee, 1970; Jansen & Gallagher, 1966; Mann, 1959; Singer, 1966; Sheehan, 1980; U. S. Commission on Civil Rights, 1967). Others suggest precisely the opposite (Barber, 1968; Dentler & Elkins, 1967; Taylor, 1967). Still others suggest that desegregation has a positive effect on the attitudes of white and negative effect on the attitudes of blacks (McWhirt, 1967) or vice versa (Crooks, 1970; Kurokawa, 1971; Webster, 1961). Finally, some like Lombardi (1962) or Trubowitz (1969) suggest no effect at all.

Third, virtually all of the reviews emphasize the wide variety of desegregated and interracial situations covered by the existing literature and the varying age, gender, social class and race of the students studied. Further they go on to point out that given the variation in particular circumstances it is reasonable, indeed almost inevitable, that different instances of desegregation will have varying effects on intergroup relations.

Fourth, the reviews tend to concern themselves exclusively with black-white relations since so few studies of the impact of desegregation on students' attitudes and behaviors include Hispanic students. The one major study of desegregation and intergroup relations in a situation involving Hispanics is the previously mentioned study of Riverside, California's desegregation experience. Gerard, Jackson, and Conolley (1975) demonstrated substantial ethnic cleavage between black, Mexican-American, and Anglo students even after several years of desegregated schooling. (However, the study did not address the question of whether even with such cleavage attitudes toward out-group members were more positive than they would have been if the children had remained in racially isolated schools.)

The reviews in this area are also similar to each other in being literary reviews rather than formal meta-analyses. Thus, the most recent of them, Schofield & Sagar, 1983, explored the possibility of advancing the state of our knowledge through formal meta-analytic procedures. Suffice it to say, for a variety of reasons discussed at length in that paper, a formal meta-analysis did not seem appropriate. Since very few methodologically acceptable studies of desegregation and intergroup behavior have been published since 1983, the situation remains the same today.

Thus, at the moment, the evidence taken as a whole suggests that desegregation has no clearly

predictable impact on student intergroup attitudes. However, there are at least three considerations which work against documenting positive social outcomes of desegregation when they exist. First, one very important characteristic that the dependent variables utilized in many of these studies have in common is the hidden assumption that intergroup relations cannot improve except at the expense of intragroup relations. For example, the dependent measures used in almost two-thirds of the studies considered for meta-analysis in Schofield and Sagar (1983) are structured so that improvement in minority/majority relations can only occur if students begin to choose outgroup members rather than ingroup members. To some extent, this assumption reflects the nature of social reality. For example, generally a student can only sit next to a few others at lunch. If black students begin to sit next to whites more frequently than before they are also likely to sit next to blacks less frequently. However, there is no reason to think that, in general, attitudes towards outgroup members can only improve if ingroup members are less valued than previously. It seems perfectly reasonable to argue that whites might become more accepting of minority group members and at the same time not change their attitudes towards other whites or vice-versa. Yet, the dependent measures used in the majority of studies are "zero-sum" measures which pick up only the changes in outgroup acceptance which occur at the expense of ingroup members.

Second, research on the impact of desegregation on actual in-school intergroup behavior as opposed to attitudes is almost non-existent. There is an obvious reason for this. As St. John (1975, p. 65) has pointed out, "Interracial behavior cannot be compared in segregated and integrated settings or before and after desegregation; it can only be examined if the races are in contact." Although one might expect a reasonably strong relationship between attitudes and behavior, there is a plethora of research in social psychology which suggests that behavior by no means follows in an automatic way from attitudes (Liska, 1974; Schuman & Johnson, 1976; Wicker, 1969). In fact, one study of a newly desegregated school concluded that although abstract racial stereotypes were intensified, a negative attitudinal outcome, black and white students came to behave toward each other much more positively as they gained experience with each other (Schofield, 1982). Further, although it is hard to substantiate this conclusion on anything other than logical basis, it seems in some ways obvious that interracial behavior is likely to be changed more by desegregation than intergroup attitudes. Unless a school is completely resegregated internally, the amount of interracial contact has to increase in a desegregated compared to a segregated environment. In contrast, attitudes do not have to change.

There is clearly no guarantee that desegregation will promote positive intergroup behavior.

However, the few studies which exist of actual behavior in desegregated schools suggest that although cross-racial avoidance is common (Silverman & Shaw, 1973; Schofield, 1982), when cross-race interaction does occur it is usually positive or neutral in nature (Schofield & Francis, 1982; Singleton & Asher, 1977). In sum, it is important to keep in mind in interpreting the mixed findings of research on desegregation and intergroup attitudes that researchers have generally not looked directly at intergroup behavior which may well be more malleable.

Third, there is some reason to believe that desegregation may have positive long-term attitudinal and behavioral consequences which are not captured in the kind of research discussed here which focuses on short term in-school changes. Although there are just a few studies that bear on this point, the research that does exist suggests that in the long run desegregation may help break a cycle of racial isolation in which both minority and majority group members, unused to contact with each other, avoid each other in spite of the fact that this limits their occupational, social, and residential choices. For example, two studies suggest that increasing levels of school desegregation are related to decreasing amounts of residential segregation (Pearce, 1980; Pearce, Crain, & Farley, 1984). At the individual rather than the community level, there is evidence that blacks who attended desegregated schools are more likely to report living in integrated neighborhoods and having white social contacts later in life (Crain, 1984b; Crain & Weisman, 1972). In a quite different area, employment, there is also evidence that school desegregation breaks down intergroup barriers. For example, Green (1981, 1982) collected follow-up data in 1980 on a national sample of black college freshmen in 1971. Individuals who had gone to a desegregated high school or college were more likely to have both white work associates and white friends as adults. In a more recent paper, Braddock, Crain, and McPartland (1984) summarize the results of several national surveys (including Green, 1981, 1982) conducted since the late 1960's and conclude that black graduates of desegregated schools are more likely to work in desegregated environments than their peers who attended segregated schools. There is little comparable research on the long-term impact of desegregation on whites. However, it seems reasonable to expect a parallel effect. Indeed, at least one study has demonstrated that the racial composition of white students' high schools and colleges influences the likelihood that they will work in a desegregated setting later in life (Braddock, McPartland, & Trent, 1984). Perhaps this finding with regard to whites is at least partially due to the fact that whites in desegregated schools show a decrease in their often initially high levels of fear and avoidance of blacks and an increasing willingness and ability to work with black students (Schofield, 1981; Collins & Noblit, 1977, Noblit & Collins, 1981). This is consistent with Stephan and Rosenfield's (1978) work suggesting

that white students who have increased contact with black and Mexican-American peers in desegregated schools develop more positive attitudes towards members of these groups. It is also consistent with the finding of a NORC survey (cited in Aspira of America, 1979) which found that desegregated white students were more likely to report having a close black friend, having had black friends visit their homes, and the like.

School Policies and Practices Which Can Influence Intergroup Relations in Desegregated Schools

Since it seems clear that the impact of desegregation on students' intergroup attitudes and behaviors varies a great deal from situation to situation, a considerable amount of research has been devoted to understanding just which sorts of policies and practices are likely to have constructive outcomes. As previously mentioned, this research includes both experimental work exploring the impact of particular practices and large scale correlational studies. I will not attempt to review or summarize all that material here for two reasons. First it has been done elsewhere (Cohen, 1980; Hawley et al., 1983; Miller, 1980; Schofield & Sagar, 1983). Second, the task is somewhat beyond the scope of this paper since the focus has been on the outcomes of desegregation rather than on how one might improve these outcomes. However, it seems important to illustrate the fundamental and crucially important point that the nature of the desegregation experience is vital to its outcomes by discussing two examples of the kinds of school policies and practices which have been shown consistently to effect intergroup relations.

Racial Composition of Classrooms

The racial composition of classrooms in desegregated schools is generally substantially influenced by the racial composition of the students enrolled in the broader school district. Yet, in drawing up desegregation plans and even in making student assignment decisions within schools, administrators usually have some degree of flexibility. Thus several researchers including St. John and Lewis (1975), Patchen (1982), and Hallinan (1982) have examined the impact of classroom racial composition on friendly interracial contact.

The work of Hallinan and her colleagues tends to support what Hallinan calls the opportunity hypothesis - the idea that increasing the number of other race peers relative to own race peers in a classroom tends to increase cross-race friendship. Exploring this idea in research with children in the third through seventh grades Hallinan finds clear support for this hypothesis, although it is not confirmed for every group in every study (Hallinan, 1982; Hallinan & Smith, 1985; Hallinan & Teixeira, in press a). The opportunity hypothesis suggests that blacks' interactions with whites will be maximized in heavily

white classrooms. However, in such environments whites' interactions with the few available black classmates will be minimal. Thus, according to this perspective a racially balanced environment tends to promote intergroup interactions for both groups as much as is possible without beginning to make one group so scarce that the other group experiences little cross-race interaction.

One of the few other studies which empirically explores the consequences of classroom racial composition both supports and qualifies Hallinan's findings. First Patchen (1982) empirically tests Hallinan's argument that classroom and not school level racial composition is likely to influence interracial interaction rates. He concludes, consistent with her point of view, that the racial make-up of a school's student body as a whole has little consistent association with the intergroup relations experienced by that school's students. However, he also concludes that the racial composition of classrooms is indeed linked to a number of important outcomes. Consistent with Hallinan's work, Patchen finds a statistically significant positive relation between the number of blacks in classrooms with white students and those students' reports of their own friendly contact with blacks. The data for black students show a clear but not statistically significant trend in a parallel direction - with blacks in heavily white classrooms reporting more friendly contact with whites than those in heavily black classrooms.

Patchen (1982) pushed the general idea of exploring the impact of opportunity for contact on intergroup relations even further by analyzing the impact of interracial physical proximity within the classroom on such relations. Results here were generally consistent with those concerning the effect of class racial proportions. Of course, the meaning of such correlations is muddled somewhat by the possibility that unprejudiced students may choose to sit near other race peers thus leading to a spurious relation between seating proximity and interracial friendliness. However, both internal analyses and data presented on seating assignment practices by Patchen are helpful in suggesting that this explanation is unlikely to account adequately for the relationships found. Furthermore, Schofield (1982) documented the way in which teachers' seat assignment practices can either inhibit or facilitate cross-group interaction. Specifically, assigning students to seats alphabetically promoted much more cross-group interaction than allowing students to select their own seats because of the students' tendency to segregate themselves when selecting their own seats.

Patchen (1982) also goes beyond measuring friendly contact, or friendship choice which Hallinan and her colleagues focus on, to looking at the impact of classroom racial composition on variables such as interracial avoidance, unfriendly contact, change in opinion of other race individuals, and the like. Not surprisingly given this plethora of related but different constructs the results of his study are complex.

However, Patchen (1982, p. 147) concludes that overall "Relationships between the races were best among students who attended majority-black classes." Specifically, in such classes attitudes toward other race schoolmates and positive change in opinion about other race individuals were generally greatest. In contrast, when blacks were a small minority avoidance on the part of both groups was fairly common, although blacks did report a lot of friendly interracial contact as one would on the basis of the opportunity hypothesis. Interestingly, Patchen reports that as the size of the black minority rose from 10% to about 50% intergroup relationships generally worsened. He explains this by pointing out that in such settings blacks often felt especially rejected by whites and whites especially threatened by blacks. He argues in the other situations blacks were either such a small minority that they posed little threat to the white status quo or they were in a majority and hence a force to which whites found ways to accommodate.

Although I have focused this section specifically on the issue of classroom racial composition, both and Patchen and Hallinan and her colleagues have explored a rich variety of other factors ranging from student background and personality variables to school climate and structure variables which appear to exert independent effects on peer relationships in desegregated schools as well as occasionally moderating the kind of effects discussed above. Thus readers interested in further exploring such issues are referred to their works cited in this section as well as to reviews in this general area such as Cohen (1980), Miller (1980), and Schofield and Sagar (1983). However, since even a brief discussion of the impact of school policies and practices on intergroup relations would be incomplete without reference to the area which has received by far the greatest share of attention, I will now turn to a consideration of the impact of cooperation on intergroup relations in desegregated schools.

Cooperative Learning Techniques

There is much evidence suggesting that cooperation can and often does have quite positive effects on interpersonal and intergroup relations. As Worchel (1979, p. 264) points out:

> **Research has demonstrated that cooperation results in increased communication, greater trust and attraction, greater satisfaction with group production, (and) greater feelings of similarity between group members.**

Such evidence has led many theorists and researchers to suggest that inducing cooperation between children from different racial or ethnic groups may well help to foster improved intergroup relations in desegregated schools. Quite a large number of studies suggest that this is indeed the case. In a large correlational study of the relation of various school practices to six different indicators of students' intergroup attitudes and behavior, Slavin and Madden (1979) found that the one practice which

showed quite consistent positive effects was assigning black and white students to work together on academic tasks. Similarly, Patchen (1982) found that working with other-race students in task-oriented subgroups facilitated friendly interracial contact. In addition, Damico, Bell-Nathaniel and Green (1981) concluded that students in schools which emphasized teamwork were more likely to have friends of the other race than were students in more traditionally structured schools. Taking a somewhat different approach to this issue, Hallinan and Teixeira (in press a) demonstrate that an emphasis on grades and standardized test scores, which presumably creates a competitive atmosphere, leads to relatively few cross-race friendships whereas an emphasis on student initiative and enjoyment of their classroom experiences is associated with higher levels of interracial friendship.

However, it seems clear that some types of cooperative situations are more likely to promote positive relations than others. For example, there are studies which suggest that whites working in cooperative groups with blacks respond more positively to their black teammates when the group experiences success than when it fails (Blanchard, Adelman & Cook, 1975, Blanchard & Cook, 1976; Blanchard, Weigel & Cook, 1975). One of these studies suggests that whites show more attraction to a black work partner when he performs competently than when he performs poorly although no parallel phenomenon who observed the ratings of white partners (Blanchard, Weigel & Cook, 1975). A second similar study conducted with white military personnel as subjects failed to replicate this finding, but it did suggest that relatively competent group members, whatever their race, were more favorably regarded than less competent group members (Mumpower & Cook, 1978). It is easy to see how friction might evolve if children of different achievement levels are required to work together and to share a joint reward for their product. Thus, although the Slavin and Madden study suggests that in general assigning students to work together does have positive effects, it seems important to specify carefully the type of cooperative situation on is speaking about.

There is also evidence that a significant amount of cooperation often does not occur spontaneously between students in interracial or multiethnic schools. Reports of voluntary resegregation on the part of students for both social and academic activities are legion (Collins, 1979; Cusick & Ayling, 1973; Gerard, Jackson & Conolley, 1975; Schofield & Sagar, 1977; Silverman & Shaw, 1973). Thus, schools hoping to improve race relations need to adopt strategies designed to promote cooperation. There has been a great deal of experimental research on strategies for promoting cooperation on academic tasks.

Most of the research on cooperative learning techniques for classroom use with academic subject matter has focused on one of five rather similar models. Virtually all of it has focused on groups of black

and white children, although there are two or three studies which include Mexican-American children (Cohen, Lotan, & Catanzarite, 1986; Slavin et al., 1985). All five techniques have been researched in classroom settings and most have books or manuals which explain their implementation. For further details on these and other techniques readers are referred to Aronson and Osherow, 1980; Cook (no date); Donnellan and Roberts, 1985; Slavin, 1980a, 1980b, 1983a, 1985; Slavin et al., 1985; and Sharan, 1980.

In some of these techniques cooperation between students on racially or ethnically-mixed teams is induced through task interdependence; that is, no individual child can fulfill his or her assignment without the assistance of others. In other cases cooperative behavior between students is induced through reward interdependence; that is, each child's grade is partially dependent on the success of other group members. Although they differ in many ways, most of these techniques have mechanisms which allow lower achievers to contribute substantially to the attainment of the group goals. In spite of the rather important conceptual differences in the way in which cooperation is induced in the different team learning programs, there is a very noticeable similarity in the outcomes which stem from use of these techniques. The large majority of studies suggest that use of these techniques leads to some improvement in intergroup relations, even if the student teams are used for a small part of the school day for no more than two or three months. In sharp contrast to the evidence with regard to many of the topics discussed in this paper, the research on the impact of cooperative group learning is generally strong, clear, and consistent. It is also noteworthy that quite a bit of research has been done on the academic impact of these strategies. Typically, these studies suggest that the impact is positive, more especially for originally low achieving students (Slavin, 1980c; 1983b). Another added benefit is that such strategies may be more consistent with the cultural backgrounds of many black and Hispanic children than present practices which emphasize competition. For example, there is a substantial body of research which suggests that Mexican-American children are more cooperatively oriented than their Anglo peers who tend to be more competitive (Diaz-Guerrero, 1987; Kagan, 1980; Kagan & Knight, 1981). The same may be true of blacks to a lesser extent (Kagan, 1980).

There is some evidence that cooperation in other spheres at school--most especially extra-curricular activities--also encourages the development of positive intergroup relations. The potential for cooperative involvement in extra-curricular activities to improve intergroup relations is suggested by Patchen's (1982) work which found that participation in extra-curricular activities had a stronger impact on interracial friendships than almost any of the other numerous variables in his study. Similarly, Hallinan

and Teixeira (in press b) report that both black and white students who participate in such activities make more cross-race best friend choices than do students who do not participate. In addition, Slavin and Madden's (1979) found that participation on integrated athletic teams was one of the few variables they studied which was related to a variety of positive intergroup attitudes and behaviors. The correlational nature of these studies leaves the direction of causality unspecified. Yet, given the clearly demonstrated positive effects of cooperative activity on intergroup relations, it seems reasonable to assume that at least some of the relation stems from the positive impact of joint activity on students' feeling about each other.

A number of studies have suggested that boys in desegregated schools engage in more positive interaction across racial lines than girls (Schofield & Francis, 1982; Jansen and Gallagher, 1966; Schofield, 1982; Schofield & Sagar, 1977; Singleton & Asher, 1977). One of the many possible factors contributing to this phenomenon is the greater involvement of boys in extra-curricular activities, most especially sports. For example, St. John (1964) found that boys in a desegregated school were more active in extra-curricular activities than girls, primarily because of their involvement with athletics teams. Although there has recently been considerable controversy about increasing the involvement of girls in athletics, it is clear that boys' intramural and extramural athletics are still generally much more important in the social life of schools than are girls' athletics. Thus, boys often have opportunities for cooperative endeavors in a highly values sphere which are either not open to girls or available but not highly valued. Indeed, one longitudinal study of a racially mixed high school football team clearly demonstrates the positive effects of cooperative involvement in team athletics on intergroup relations between boys, although it suggests that these effects are quite situation specific (Miracle, 1981).

Although team sports are a very visible cooperative extra-curricular activity, they are far from the only ones which have the potential for improving intergroup relations. Activities like the school newspaper, band, dramatic club and choir also provide an opportunity for students to work together toward shared goals. The important question appears to be how to insure that such activities, including sports teams, do not become segregated. It seems unwise to argue that all types of students should participate in all clubs in exact relation to their proportion in the student body. Cultural differences between ethnic groups may lead to differences in interests which would naturally be reflected in differential rates of enrollment in some activities. Yet, often it seems that the resegregation of extra-curricular activities is much more than a reflection of different interests. Rather, once an activity is seen as belonging to a particular group, members of other groups who would like to join begin to feel uncomfortable and unwelcome (Collins, 1979; Scherer & Slawski, 1979). Such resegregation of extra-

curricular activities is especially unfortunate since many of these activities present good opportunities for cooperative contact which differences in academic performance may not impede as much as they sometimes impede smooth cooperation in the classroom.

In summary, there is substantial evidence suggesting that cooperation in the pursuit of shared goals can have a positive effect on relations between students in desegregated schools. There are a number of well-researched techniques available for promoting cooperation in the classroom. Although the impact of cooperation on non-academic tasks has not been as closely studied, it too seems conducive to positive relations. Further, it is clear that the resegregation of widely valued extra-curricular activities like athletics can lead to tensions and resentment. Thus, strategies which are effective in encouraging cooperative contact in such activities seem likely to lead to more positive intergroup relations. Just one caveat must be added. Although such cooperative learning strategies have great potential, a body of work by Cohen and her colleagues suggests one factor which needs to be dealt with. Often in cooperating groups majority group students tend to dominate the interaction with black and Mexican-American peers even when there is no preexisting difference in skills which would account for this (Cohen, 1972, 1980). Disproportionate influence of majority group members appears to be a rather general phenomenon since it has been demonstrated with whites and Native-Americans as well as between members of high and low status groups in other countries (Cohen & Sharan, no date). Fortunately, some research has been conducted on ways in which this problem can be mitigated (Cohen, 1980; Cohen, Lotan, & Catanzarite, 1986; Cohen & Roper, 1972).

Conclusions

The Brown decision which laid the basis for school desegregation did not come quickly or easily. Neither did implementation of the historic decision follow quickly on the heels of its issuance. Continued legal battles, continued political pressure, and great courage on the part of many black students and parents involved in desegregation efforts were required to make the law a reality.

What have been the outcomes flowing from the desegregation which has been achieved over the past three decades? First, research suggests that desegregation has had some positive effect on the reading skills of black youngsters. The effect is not huge. Neither does it occur in all situations. However, a measurable effect does seem to occur. Such is not the case with mathematics skills which seem generally uneffected by desegregation. Second, there is some evidence that desegregation may help to break what can be thought of as a generational cycle of segregation and racial isolation. Although

research in this topic is scant and often marred by unavoidable flaws, evidence has begun to accumulate that desegregation may favorably influence important adult outcomes such as college graduation, income, and employment patterns. The measured effects often are weak, yet they are worth consideration because of the vital importance of these outcomes for both minority group members individually and for our society as a whole.

The evidence regarding the role of desegregation on intergroup relations is generally held to be inconclusive and inconsistent. However, three points which are not adequately addressed by the research literature need to be considered here. First, the abolishing of dual systems and the changes required in systems found to have engaged in other sorts of de jure segregation of necessity have changed certain important aspects of minority/majority relations in this country. The existence and legal sanctioning of governmental policies and practices intended to segregate blacks or Hispanics were and are in and of themselves statements about intergroup relations. Even if no other specific benefits were to flow from the Brown decision, in my view at least, the abolishing of this sort of governmentally sanctioned "badge of inferiority" was an important advance in intergroup relations. Second, as discussed earlier, most studies of desegregation and intergroup relations have not addressed the question of how intergroup behavior has changed. They have focused almost exclusively on attitudes because "pre" measures of attitudes are available whereas there is no feasible way to measure intergroup behavior in segregated schools. Yet there are indications that desegregated schooling can provide students with valuable behavioral experience which prepares them to function in a pluralistic society. In fact, some studies suggest that this occurs even when racial attitudes become more negative. In addition, there is some evidence that school desegregation may have long-term positive consequences on adult social relationships, housing patterns, and the like. Finally, we are beginning to have some idea of the school policies and practices which influence the way in which desegregation affects academic achievement and intergroup relations. It is clear that desegregation can be implemented in very different ways and that these differences have marked and often predictable effects. Seeing the desegregation process itself as the beginning of interracial schooling and focusing on the actual nature of the desegregated experience should make it possible to improve present outcomes.

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Footnotes

[1] I recognize the fact that the Hispanic population of Connecticut is largely Puerto Rican and that research on Mexican-Americans may be of only marginal interest. However, an extensive search led me to conclude that there is almost no research of reasonable quality on Puerto Ricans and desegregation. The extraordinary lack of interest in education issues pertaining to Puerto Ricans is captured vividly in Senator Mondale's remarks below. Although these remarks were made nearly two decades ago, the situation has not changed markedly.

> We had . . . hearings on the educational problems of Mexican Americans, who comprise the second largest minority, six million. The TV cameramen broke their legs trying to get out of the room when we turned to the subject. I decided that the fastest way to empty a hearing room was to announce hearings on Mexican American education problems.
>
> But I have now found a way to clear a hearing room even faster, and that is to discuss Puerto Rican education problems.

[2]This study examined enrollment at both two- and four-year institutions only in the North, since geographic proximity is a very major factor in college choice and there are very few four-year colleges with a high proportion of black students in the North.